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U.S. DEPARTMENT OF COMMERCE
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FIPS PUB 54-1

FEDERAL INFORMATION PROCESSING STANDARDS PUBLICATION
(Supersedes FIPS PUB 54 – 1978 July 15)

COMPUTER OUTPUT MICROFORM (COM) FORMATS AND REDUCTION RATIOS, 16MM and 105MM

CATEGORY: HARDWARE STANDARD **SUBCATEGORY: MEDIA**

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COMPUTER OUTPUT MICROFORM (COM) FORMATS AND REDUCTION RATIOS, 16MM and 105MM

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Computer Systems Laboratory
National Institute of Standards and Technology
Gaithersburg, MD 20899

Issued January 15, 1991

U.S. Department of Commerce
Robert A. Mosbacher, Secretary

National Institute of Standards
and Technology
John W. Lyons, Director

Foreword

The Federal Information Processing Standards Publication Series of the National Institute of Standards and Technology (NIST) is the official publication relating to standards and guidelines adopted and promulgated under the provisions of Section 111(d) of the Federal Property and Administrative Services Act of 1949 as amended by the Computer Security Act of 1987, Public Law 100-235. These mandates have given the Secretary of Commerce and NIST important responsibilities for improving the utilization and management of computer and related telecommunications systems in the Federal Government. The NIST through its Computer Systems Laboratory provides leadership, technical guidance, and coordination of Government efforts in the development of standards and guidelines in these areas.

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James H. Burrows, Director
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Abstract

This FIPS PUB specifies the image arrangement, size, and reduction ratios for 16mm and 105mm microforms generated by Computer Output Microfilmers. It is limited to systems using business-oriented fonts similar to line printer output. This revised FIPS adopts American National Standard for Information and Image Management – Microfiche, ANSI/AIIM MS5-1991, and American National Standard for Information and Image Management – Specifications for 16mm and 35mm Roll Microfilm, ANSI/AIIM MS14-1988.

Key words: COM formats and reduction ratios; communications; computer output microform; computer system hardware; computers; data processing; data processing equipment; Federal Information Processing Standard; information systems; microfiche; microfilm; standards.

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Federal Information Processing Standards Publication 54-1

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Announcing the Standard for

COMPUTER OUTPUT MICROFORM (COM) FORMATS AND REDUCTION RATIOS, 16MM AND 105MM

Federal Information Processing Standards Publications (FIPS PUBS) are issued by the National Institute of Standards and Technology (NIST) after approval by the Secretary of Commerce pursuant to Section 111(d) of the Federal Property and Administrative Services Act of 1949 as amended by the Computer Security Act of 1987, Public Law 100-235.

1. Name of Standard. Computer Output Microform (COM) Formats and Reduction Ratios, 16mm and 105mm.

2. Category of Standard. Hardware Standard, Media.

3. Explanation. This Federal Information Processing Standard announces the adoption of American National Standard for Information and Image Management – Microfiche, ANSI/AIIM MS5-1991, and American National Standard for Information and Image Management – Specifications for 16mm and 35mm Roll Microfilm, ANSI/AIIM MS14-1988. This FIPS specifies the image arrangement, size, and reduction ratios for 16mm and 105mm microforms generated by Computer Output Microfilmers. It is limited to systems using business-oriented fonts similar to line printer output.

4. Approving Authority. Secretary of Commerce.

5. Maintenance Agency. U.S. Department of Commerce, National Institute of Standards and Technology (Computer Systems Laboratory).

6. Cross Index. American National Standard for Information and Image Management – Microfiche, ANSI/AIIM MS5-1991, and American National Standard for Information and Image Management – Specifications for 16mm and 35mm Roll Microfilm, ANSI/AIIM MS14-1988.

7. Related Documents.

a. Related documents are listed in the Reference Sections of ANSI/AIIM MS5-1991 and ANSI/AIIM MS14-1988.

b. Federal Information Resource Management Regulation 201-39, Acquisition of Federal Information Processing Resources by Contracting.

8. Objectives. The primary objectives of this standard are:

- to achieve uniform microform formats for the output of Computer Output Microfilmers.
- to provide microforms which are cost-effective in producing computer generated reports, listing, etc.
- to provide microforms which can economically be duplicated, widely distributed, and stored.
- to minimize the variety (and therefore costs) of equipment required to reproduce and view the microforms.

9. Applicability. This standard is applicable to those microforms which are computer generated in lieu of line-printer output using plain type faces. It does not cover engineering drawings or microphoto-composition using complex graphics or graphic arts fonts and formats, nor does it cover special systems using two-step reduction techniques. Standards for these applications will be developed as required.

The microform formats and reduction ratios specified herein are mandatory for the acquisition of new Federal Government computer output microform systems, applications, and services performed by contractors to Federal agencies.

Users of existing COM systems and applications are encouraged to utilize this standard. Systems and applications not in accordance with this standard should be evaluated periodically by Federal agencies and the merits of converting to the standard considered.

10. Specifications. This standard adopts ANSI/AIIM MS5-1991, American National Standard for Information and Image Management – Microfiche, and the applicable sections and appendices for 16mm microfilm using reduction ratios of 1:24 and 1:48 in the simplex formats of ANSI/AIIM MS14-1988, American National Standard for Information and Image Management – Specifications for 16mm and 35mm Roll Microfilm.

11. Implementation Schedule. This revised standard is effective July 1, 1991. Microforms produced by or for Federal agencies and equipment or services acquired after the effective date of this FIPS PUB must be in conformance with the specifications contained herein. Exceptions to this standard are made in the following cases:

a. For microforms, equipment, or services produced, procured, or on order prior to the effective date of this FIPS PUB.

b. Where procurement actions are into the solicitation phase (i.e., Requests for Proposals or Invitations for Bids have been issued) on the effective date of this FIPS PUB.

12. Special Information. This FIPS permits only two effective reduction ratios, namely 1:24 and 1:48. It is recognized that a number of Government agencies have already acquired and are using systems at a 1:42 reduction. The implementation of this standard is not intended to cause replacement of these systems but is directed toward future COM acquisitions and applications as described. Since current technology permits adequate image quality in both image and display devices and allows for higher information density packing, the reduction ratio of 1:48 is specified in this standard instead of the 1:42 ratio. Current readers with a 42:1 magnification can be used effectively for viewing 1:48 recorded images made according to the specifications.

13. Waivers. Under certain exceptional circumstances, the heads of Federal departments and agencies may approve waivers to Federal Information Processing Standards (FIPS). The head of such agency may redelegate such authority only to a senior official designated pursuant to section 3506(b) of Title 44, U.S. Code. Waivers shall be granted only when:

a. Compliance with a standard would adversely affect the accomplishment of the mission of an operator of a Federal computer system, or

b. Cause a major adverse financial impact on the operator which is not offset by Governmentwide savings.

Agency heads may act upon a written waiver request containing the information detailed above. Agency heads may also act without a written waiver request when they determine that conditions for meeting the standard cannot be met. Agency heads may approve waivers only by a written decision which explains the basis on which the agency head made the required finding(s). A copy of each such decision, with procurement sensitive or classified portions clearly identified, shall be sent to: National Institute of Standards and Technology; ATTN: FIPS Waiver Decisions, Technology Building, Room B-154; Gaithersburg, MD 20899.

In addition, notice of each waiver granted and each delegation of authority to approve waivers shall be sent promptly to the Committee on Government Operations of the House of Representatives and the Committee on Governmental Affairs of the Senate and shall be published promptly in the *Federal Register*.

When the determination on a waiver applies to the procurement of equipment and/or services, a notice of the waiver determination must be published in the *Commerce Business Daily* as a part of the notice of solicitation for offers of an acquisition or, if the waiver determination is made after that notice is published, by amendment to such notice.

A copy of the waiver, any supporting documents, the document approving the waiver and any supporting and accompanying documents, with such deletions as the agency is authorized and decides to make under 5 U.S.C. Sec. 552(b), shall be part of the procurement documentation and retained by the agency.

14. Where to Obtain Copies. Copies of this publication are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. (Sale of the included specifications documents is by arrangement with the Association for Information and Image Management.) When ordering, refer to Federal Information Processing Standards Publication 54-1 (FIPSPUB54-1), and title. Specify microfiche, if desired. Payment may be made by check, money order, or NTIS deposit account.

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